REMARKS

Claims 14-26 have been cancelled. Claims 10 and 11 have been amended. Claims 1-13 and 27-64 are now pending in this application. Claims 27-64 are withdrawn but rejoinder has been requested. Support for the amendments is found in the existing claims and the specification as discussed below. Accordingly, the amendments do not constitute the addition of new matter. Applicant respectfully requests the entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

Election/Restriction

With this amendment, claims corresponding to Group II (claims 14-26) have been cancelled. Applicants reiterate their request that Group III and IV claims (claims 27-64) be rejoined upon the indication of allowable subject matter for Group I.

Rejection under 35 U.S.C. § 112, second paragraph

Claim 11 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Office Action states that the term "continuous surface" is unclear. With this amendment, the term "continuous surface" has been deleted from claim 11. Accordingly, this ground of rejection may now be withdrawn.

Rejection under 35 U.S.C. § 102(b)

Claims 10 and 11 are rejected under 35 U.S.C. § 102(e) as being anticipated by Shastri, et al. (US 2005/0079159).

The Office Action states that Shastri, et al. teach a polymer matrix which is coated with a gel matrix of gelatin which may include calcium chloride.

This ground of rejection is believed to be overcome by Applicants' amendment of claim 10 to recite the preferred concentration range of 10-40 mM calcium chloride. Support for the amendment is found in paragraph 0044 of the specification at page 12, line 4. Shastri, et al do not teach the claimed concentration of calcium chloride. Furthermore, the claimed concentration range is outside of the range normally used for cell culture as the purpose here is for cell transfection.

In view of Applicants' amendments, reconsideration and withdrawal of the above ground of rejection is respectfully requested.

Rejection under 35 U.S.C. § 103(a)

Claims 1-8 and 10-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sabatini, et al. (US 2002/0006664 A) in view of Qiagen ("Effectene Transfection Reagent" Product Information), further in view of Ausubel, et al. (Current Protocols in Molecular Biology, 1988).

Sabatini et al. differ from the claimed invention in several respects. First, as set forth in the Office Action, Sabatini, et al. teach a slide spotted with DNA in a gelatin matrix. In contrast, Applicants' claims are directed to a multiwell plate wherein the bottom of at least some of the wells are at least partially coated with a composition comprising a metal salt (which may be $CaCl_2$). That is, in the claimed invention the transfection agent is fixed on the multiwell plate while in Sabatini, et al, the transfection agent is added later as a solution. This is not a trivial difference. The transfection plates according to the present invention are ready to be used with any combination of DNA and cell as desired. In contrast, the device of Sabatini et al. is already destined for transfection of whatever DNA is already affixed to the surface. The transfection plates of Sabatini, et al do not have broad appeal as only researchers interested in the DNA affixed to the plate would be interested in obtaining the plate for transfection experiments. On the other hand, anyone interested in cell transfection could use the transfection device according to the claimed invention because they are free to choose whatever nucleic acid and whatever cell type that they would like to transfect.

Second, Sabatini, et al. do not teach the use of calcium chloride as a transfection agent. In fact, Sabatini, et al. do not teach the use of any metal salt as a transfection agent. Instead, Sabatini, et al. teach the use of "Effectene Transfection Reagent" available from Qiagen (page 4, paragraph 2 of the Office Action). While the Office Action asserts that "Effectene Transfection Reagent" is calcium chloride (see page 4, paragraph 3 of the Office Action), in the website page for "Qiagen Transfection Reagent," cat. no. 301425, in the attachment to the Office Action provided by the Examiner, the description on the first page states that "Effectene Transfection Reagent is an innovative non-liposomal **lipid** formulation..." (emphasis added). Accordingly, as "Effectene" is not calcium chloride, the method of Sabatini, et al is completely dissimilar to

the claimed method. Not only does Sabatini, et al. fail to teach affixing a transfection agent in a gel matrix, Sabatini, et al. do not teach a transfection agent which is a metal salt, in particular calcium chloride. Rather the teaching of Sabatini, et al. is directed to a lipid based transfection agent.

Third, neither Sabatini, et al. nor any of the art cited teach that a transfection agent such as calcium chloride could efficiently transfect cells when affixed to a solid surface. The Office Action states that even if the Qiagen reagents are not "HEPES-buffered saline, ethanol, and calcium chloride, respectively, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use HEPES-buffered saline, ethanol, and calcium chloride in the calcium phosphate transfection described by Sabatini, et al. ...One would have expected success using HEPES-buffered saline, ethanol, and calcium chloride in place of the "Effectene Transfection Reagent Kit" because HEPES-buffered saline, ethanol, and calcium chloride are the standard protocol, known in the art, for producing calcium phosphate-DNA precipitate (See, e.g. Ausubel et al.)" (Office Action, page 4, line 16 to page 5 line 3). Sabatini, et al. does not use $CaCl_2$ as a transfection agent, as discussed above, and does not teach calcium phosphate transfection. Although calcium chloride was known as a transfection agent for mammalian cells, it was not known at the time of the claimed invention that $CaCl_2$ could be effective as a transfection agent when affixed to a solid surface in a gel matrix. The calcium phosphate precipitation method described by Ausubel, et al. does not teach or suggest a solid surface coated with a metal salt such as calcium chloride either alone or in combination with the other cited references. None of the cited references teach adherence of calcium chloride to a solid surface in a gel matrix for cell transfection. It could not have been predicted that a metal salt, such as calcium chloride, affixed to a solid surface, could efficiently serve as a transfection device based upon the cited references.

In summary, Sabatini, et al. fail to teach calcium chloride affixed to a solid surface. Instead, Sabatini, et al. teach DNA affixed to a solid substrate by a gelatin matrix. Substitution of Applicants' metal salt for the DNA of Sabatini, et al. is by no means an obvious substitution, especially since Sabatini, et al. do not teach use of a metal salt as a transfection agent at all. Sabatini, et al. use a commercially available lipid-based transfection agent.

The secondary references do not correct the deficiencies of Sabatini, et al. The Qiagen website reference merely indicates that the transfection reagent referred to by Sabatini, et al. is a lipid-based reagent. The Ausubel, et al. reference teaches a well known method of transfecting mammalian cells that differs from both Sabatini, et al and the presently claimed invention. Although Ausubel, et al. do teach the use of calcium chloride as a transfection agent, it is difficult to see how this is combinable with Sabatini, et al or how this renders obvious the present claims as the method of Ausubel, et al. uses calcium phosphate precipitation of the DNA which procedure is not used by either the primary cited reference (Sabatini) or the presently claimed invention.

In view of Applicants' amendments and arguments, reconsideration and withdrawal of this ground of rejection is respectfully requested.

CONCLUSION

In view of Applicants' amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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By: Che S. Chereskin

Che Swyden Chereskin, Ph.D.
Registration No. 41,466
Agent of Record
Customer No. 20,995
(949) 760-0404

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